**Product Description**

The General Dynamics SATCOM Technologies Digital Tracking Receiver (DTR) is a fully synthesized tracking receiver developed for satellite tracking and uplink power control applications. This DSP-based receiver accepts wideband RF inputs, performs frequency selection, and digitally processes the selected signal.

The DTR can be configured for numerous input frequency ranges from L-band to Ka-band. Multi-band applications are also readily accommodated. DDS techniques facilitate 1 kHz frequency resolution for any input frequency range.

The use of DSP technology, rather than conventional analog radio techniques, provides outstanding linearity and operational flexibility. Software controlled signal detection can accommodate virtually any modulation scheme.

A powerful and intuitive user interface provides the ability to custom configure specific applications in a very straightforward manner. The user settings provide easy configuration of tracking signal slope to match a wide range of next-level system components. A “Spectral Display” function allows the user to view real time amplitude vs. frequency data.

The flexibility and unparalleled attributes, resulting from state-of-the-art concepts and components, places the DTR at the forefront of receiver technology.
Additional Features

Contextual menus, spin knob and keypad aid user interaction

Monopulse capability (optional)

Excellent tracking signal linearity

Absolute input power level display

Serial and parallel remote control capability (contact closure; RS-232, RS-422)

Front Panel 70 MHz monitor port (50 Ω BNC female)

Bandwidth filter options as low as 16 kHz to maximize C/No

Bandwidth filter options for standard configurations as wide as 500 kHz to supported modulated carriers

RF Specifications

Tuning Resolution 1 kHz
Frequency Stability (0-50˚C) ± 5 PPM
RF Signal Input Impedance 50 Ω
Input Total Power Level -10 dBm max
Input Signal Level Range -40 to -110 dBm (nominal)
Minimum Signal Level Input C/N₀ 35 dB-Hz
Detection Type FFT-Based, Non-Coherent Integration
Serial Data Interface RS-232, RS-422
Serial Data Rates 1200, 9600, 19.2k, 38.4k, 56k bps
Analog Tracking Voltage Outputs -10 to +10 VDC (Configurable)
14-bit Resolution
Tracking Voltage Sensitivity (Tracking Slope) User Adjustable (-1V/dB - +1V/DB)
Tracking Voltage Linearity ± 0.5 dB
70 MHz IF Monitor Port Impedance 50 Ω

Optional Features

Additional buffered DC Tracking Signal Output
Dual Channel Configuration for Monopulse Tracking
Communication Carrier Tracking Capability
Additional RF Inputs for Dual Pol/Multi-Band Applications
Bandwidth filters up to 16 MHz
Monopulse Capability

Ordering Information

Specify:
- Input Frequency ranges
- Single or Dual Pol Input
- Line Voltage
- One or two buffered DC outputs
- Optional Features
- System Specifics

Shown below is the DTR rear panel:

The Spectral Display offers a convenient amplitude vs. frequency display of the received signal. The display is useful for system fault isolation, for routine maintenance and is also cost effective when a full function spectrum analyzer is not available or necessary.